

What Is Claimed Is:

1. A detector calibration method, wherein a power meter with traceability to the national standard of optical power is used to calibrate the power of each photodetector device of a detector with photodetector device arrays arranged in one dimension or two dimensions and also to calibrate the output signals of the detector, so that it is possible to measure the spatial distribution of a light source's power and values of optical power with traceability to the national standard directly from the output signals of the detector pixels.
2. The detector calibration method of claim 1, wherein said detector is calibrated by measuring a reference light source with said power meter and then by measuring the detector with the reference light source.
3. The detection calibration method of claim 1 or claim 2, wherein said detector is a camera with a photodetector part comprising a plurality of pixels.
4. A power measurement instrument, which is equipped with a detector calibrated according to the detector calibration method described in claim 1 or claim 2, and which measures biochips, cells, fluorescent coating materials, or fluorescent dust.
5. A power measurement instrument, which is equipped with a means of calculating the number of molecules in a fluorescent object from a detector calibrated according to the detector calibration method described in claim 1 or claim 2, and output signals of the detector which detects fluorescent power from the fluorescent object, and the formula for the power generated from fluorescent dye, and which can directly estimate the power or number of molecules or power and number of molecules of the fluorescent object.